

**HAHN AND ASSOCIATES, INC.**  
ENVIRONMENTAL CONSULTANTS

October 15, 2015

Mr. Dana Bayuk  
Oregon Department of Environmental Quality  
Northwest Region, Portland Office  
Portland Harbor Section  
700 NE Multnomah Street, #600  
Portland, Oregon 97232

HAI Project No. 2708  
DEQ ECSI File No. 84

**SUBJECT: Progress Report, NW Natural Site, 7900 NW St. Helens Avenue and  
7200 NW Front Avenue, Portland, Oregon**

Dear Mr. Bayuk:

Hahn and Associates, Inc. (HAI) has prepared this monthly Progress Report to summarize Remedial Investigation/Feasibility Study (RI/FS) and source control-related work activities conducted by NW Natural relating to historic manufactured gas plant (MGP) activities at the NW Natural Site during the month of September 2015. NW Natural is completing upland investigation and cleanup activities at the NW Natural Site under the Voluntary Agreement No. ECVC-WMCVC-NWR-94-13 (Voluntary Agreement) between NW Natural and the Oregon Department of Environmental Quality (DEQ).

**1.0 Communications and Document Submittals**

In correspondence dated September 2, 2015 (Pradeep Mugunthan to Dana Bayuk), Anchor QEA, on behalf of NW Natural, transmitted a memorandum documenting responses to DEQ's comments from review of a June 15, 2015 groundwater modeling presentation. DEQ provided feedback on the responses in correspondence dated October 6, 2015 (Dana Bayuk to Pradeep Mugunthan).

A teleconference with representatives of DEQ and NW Natural was conducted on September 2, 2015 to review initial feedback from DEQ's review of a July 17, 2015 *Groundwater Quality Data Monitoring Report*.

In correspondence dated September 2, 2015 (Dana Bayuk to Halah Voges), DEQ provided feedback as agreed during the August 17, 2015 FS planning check-in meeting, including: background information on the previously contemplated DNAPL removal pilot study, documentation of agreements from the HERA related to evaluating the "leaching to groundwater pathway" in the FS; and, feedback on the "Look Back" documents list provided by NW Natural.

In correspondence dated September 3, 2015 (Dana Bayuk to Halah Voges), DEQ provided feedback on the FS check-in meeting summary for the meeting that occurred on August 17, 2015.

In correspondence dated September 9, 2015 (John Renda to Dana Bayuk), Anchor QEA, on behalf of NW Natural, provided notice to DEQ of upcoming fieldwork associated with the third quarter 2015 integrated groundwater monitoring event.

Correspondence dated September 11, 2015 (Dana Bayuk to John Renda), provided DEQ's understanding of the status of various upcoming tasks (e.g., TarGOST boring schedule; PW-1Ub installation; DNAPL monitoring schedule changes; and Phase 2 HC&C reporting items).

In correspondence dated September 17, 2015 (Dana Bayuk to John Renda and Rob Ede), DEQ provided comments from review of the July 17, 2015 *Groundwater Quality Monitoring Data Report*.

In correspondence dated September 18, 2015 (Halah Voges to Dana Bayuk), Anchor QEA transmitted meeting materials in advance of the September 21, 2015 Gasco Upland Feasibility Study (FS) check-in meeting.

Check-in meetings with representatives of NW Natural and DEQ were conducted on September 21, 2015 and on September 29, 2015 to discuss ongoing development of the Gasco Uplands Feasibility Study.

In correspondence dated September 21, 2015 (Dana Bayuk to Ben Hung and Rob Ede), DEQ requested that NW Natural copy Ms. Eva DeMaria, Region X EPA, on upland source control-related correspondence.

## **2.0 Field Work**

HAI field activities related to monitoring and maintenance of the dense non-aqueous phase liquid (DNAPL) extraction system at surficial fill well locations MW-6-32 and MW-13-30 occurred during September 2015. The storage tank containing recovered DNAPL reached capacity in the late July / early August time-frame and the system automatically shut down. On September 9, 2015 Thermo Fluids, Inc. emptied the storage tank and transported 461 gallons of oil/water mixture to their Clackamas, Oregon facility for re-refining. The system subsequently recovered approximately 22 gallons of fluids, primarily DNAPL, between September 9, 2015 and the end of the month.

Tasks related to optimization and maintenance of the HC&C system and the groundwater treatment system were conducted in September 2015, with the system operating under Phase 2 testing parameters since July 21, 2015.

HAI and Anchor QEA initiated the Third Quarter 2015 Integrated Groundwater Monitoring Event at the Gasco and Siltronic properties during September 2015 (initiated September 16, 2015), with all sampling activities anticipated to be completed in October 2015 (completed October 13, 2015).

Baseline DNAPL removal as needed to maintain at levels below the top of the well sumps was conducted by Anchor QEA during September 2015 in the following wells near the river shoreline.

- MW-16-45
- MW-18-30
- MW-26U
- MW-27U
- MW-34L
- MW-38U
- MW-PW-2L

On March 31, 2014 NW Natural discontinued routine discharges of treated groundwater to the sanitary sewer (Industrial Wastewater Discharge Permit 500.022). During September 2015 all water was directed to NW Natural's on-site wastewater treatment plant and discharged to the Willamette River consistent with National Pollutant

Discharge Elimination System (NPDES) Permit No. 103061 (expires August 31, 2018). Results from NW Natural's NPDES effluent sampling are provided to DEQ in Discharge Monitoring Reports that are submitted on a monthly basis in accordance with the permit. A total of 11,145,358 gallons of treated water were discharged under the NPDES permit during September.

### **3.0 Anticipated Activities October and November 2015**

NW Natural and DEQ technical working group communications and meetings are anticipated to occur as needed during October and November 2015 to discuss ongoing project tasks.

The draft Feasibility Study Work Plan for the Gasco Uplands will be under development during the indicated time-frame, with monthly DEQ check-in meetings scheduled over the duration of the plan development.

A memorandum describing well design and proposed installation methods for supplemental groundwater extraction well PW-1Ub, near the PW-1U extraction well, will be prepared (provided to DEQ on October 2, 2015). Installation of well PW-1Ub is anticipated to occur in November 2015 based on current drill rig availability.

Completion of TarGOST boring installation as part of the HC&C Performance Monitoring Program is anticipated to occur in November 2015.

The *HC&C Model Calibration and Validation Report* will be prepared for submittal to DEQ after agreements with the agency are reached related to model calibration. NW Natural has proposed a Workshop with DEQ and EPA to address outstanding questions on model calibration.

Long-term HC&C system operation, initiated during July 2015 and initially approved for nine months, will continue through indicated timeframe.

Preparation and transmittal of monthly HC&C system Figure sets will occur during the indicated timeframe as part of the routine HC&C system reporting requested by DEQ.

A Contaminated Materials Management Plan is being prepared for submittal in the fall of 2015.

The *Groundwater Treatment System Operations and Maintenance Manual*, prepared by Severson Environmental Services, Inc., dated May 2015 is being updated based on feedback provided by DEQ and DOJ and will be resubmitted in the fall of 2015.

Initiation of supplemental Doane Creek investigation activities will occur once access agreements with the off-site property owners (Portland & Western Railroad and Burlington Northern & Santa Fe Railway Company), which are presently under negotiation, are finalized. Agreements are expected to be in place during the fall of 2015.

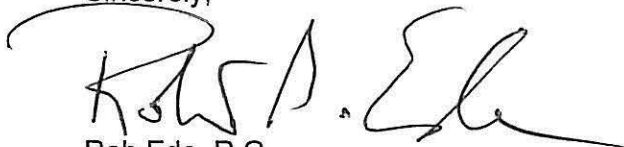
NW Natural is in the process of creating a new tabulation to represent NW Natural's overall groundwater monitoring program at the Gasco and Siltronic properties. A draft tabulation will be provided for DEQ feedback in late October 2015.

The following reports and work plans for the Site have been submitted to DEQ through the date of this progress report. Unless otherwise noted, NW Natural has not received DEQ comments on these documents.

- *Fill WBZ Trench Design Evaluation Report, Gasco/Siltronic*, prepared by Anchor QEA, dated April 8, 2015.
- *Hydraulic Control and Containment (HC&C) System Operation and Maintenance (O&M) Manual*, prepared by Anchor QEA, dated May 1, 2015.
- *HC&C Capture Performance and Monitoring Plan (PMP)*, prepared by Anchor QEA, dated May 1, 2015.
- *Gasco Extraction Well PW-1Ub Design and Installation Methods Memorandum* prepared by Anchor QEA, dated October 2, 2015.

Should you have any questions, please contact the undersigned.

Sincerely,



Rob Ede, R.G.  
Principal

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